

7.

FORTY-SIXTH

ANNUAL REPORT

OF THE

SURGEONS

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY.

FEBRUARY, 1872.



BOSTON:

JAMES CAMPBELL, PUBLISHER.

MEDICAL AND SCIENTIFIC BOOKSELLER,

18 TREMONT STREET.

1872.

Printed by Order of the Trustees.

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I. SURGEONS' REPORT.

As will be seen below a large number of persons have applied at the Infirmary for advice during the past year. They are supposed to be, and the most of them probably are, poor, unable to pay for the desired medical advice or for their medicines. They seek relief, some of them from pain, some from impairment or loss of sight, others from deafness or deformity, and others again from more than one of these ailments. The time has not come when charitable medical treatment can be dispensed with. The poor are among us and are suffering, they desire medical treatment and are grateful for the service.

Two classes of patients have been treated at the Infirmary; the so-called house-patients, those who are lodged and boarded at the institution, of whom there have been during the year 342; also the out-patients, who simply visit the institution, wishing advice and generally also medicines; of this class there have been during the year, 5,258, of whom 1,280 were ear-patients.

The large number of eye-patients, about 4,000 need not surprise us when we think of the delicate and complicated structures and functions of the eye, and of the excessive strain often imposed upon it by the necessity of earning a livelihood; of the liability to severe injury which accompanies many occupations, as those of boiler-

makers, machinists, stone-cutters, etc. ; also of those accidents which may occur to children from dangerous amusements, as in exploding percussion caps, shooting pointed missiles, etc. ; when we remember that many diseases of other parts of the body may bring with them serious disease of the eye, and how difficult it is for the poor to enjoy those requisites of health, good air, cleanliness, and wholesome food ; — remembering these and other causes, we need not wonder at the frequency of ophthalmic diseases among the poor.

The diseases of this organ are many ; for instance ; the tear-passages may be obstructed, and the eyes overflow with tears ; or the tear-sac may be the seat of a painful abscess ; the lids may be variously diseased ; they may not close properly ; the lashes may scrape the eye ; the lining membrane of the lids may be inflamed or rough ; it may also become shrunk and scarred, the eyeball being thereby impeded in its movement and irritated. Besides these and other affections of the same parts, the various parts of the eyeball and optic nerve may be affected in ways too numerous to be mentioned here, the treatment of which requires the best efforts of the surgeon.

For many years at the Infirmary we have found the accommodations for the treatment of aural patients inadequate to our wants. But during the past year, through the liberality of the trustees, that difficulty has been obviated ; an ample consulting-room for this class of patients has been provided, and experience has proved it admirably adapted to the purpose. This improvement has added to the comfort of the patients and surgeons, and its beneficial effects will undoubtedly be seen in the result of treatment, as the good light which this new room affords at all seasons enables us to make a more thorough examination of the ear and a more correct diagnosis.

An erroneous opinion exists in the community that diseases of the ear are scarcely benefited by treatment, consequently good results are seldom hoped for. Chronic diseases are often obstinate and frequently incurable. But acute affections may be treated with as much success as acute diseases of other organs. We may infer however from the increase of patients at the Infirmary to nearly fourfold within the last few years, that this error is at last on the decrease. On the other hand it must not be overlooked that aural surgery has been more extensively and successfully cultivated than heretofore. It would be well were the public impressed with the importance of seeking relief in the early stage of their trouble, as our statistics show that the larger proportion apply for treatment after the disease has assumed the chronic form.

To provide properly for the numerous applicants for treatment, the Infirmary needs of course ample hospital accommodations, good nurses, wholesome, palatable and often even attractive food; medicines, instruments, apparatus, etc. and to obtain these, money is needed, without which the charitable services of the institution must be contracted.

While the first object of the Infirmary should undoubtedly be to relieve the sufferings and disabilities of those unfortunates who are obliged by poverty to present themselves, often reluctantly, for medical treatment at a charitable institution, it is yet of great importance to afford to students of medicine, so far as is consistent with the principal object in view, an opportunity of observing the diseases and their treatment; inasmuch as any means which might contribute to the preparation of competent, well-instructed practitioners, unfortunately, at times needed by all of us, both rich and poor, should not, if practicable and proper, be neglected. In this connection,

it may also be remarked that notwithstanding the advance of otology and the comparatively engrossing importance of the many brilliant additions to ophthalmology made during the past twenty years, we can not think that the period of inquiry and improvement is passed; it may therefore be a legitimate part of the functions of the Infirmary, considering the ample opportunity for observation, to contribute if it may be so fortunate, something to the general stock of medical knowledge.

As to the results of treatment; many cases are relieved, or cured within a few weeks; others require a long period and a change of hygienic surroundings; others again hardly yield at all to medical treatment.

By the statistics given below, it appears that the number of males treated, exceeds that of the females by 266; that only a very small part of those applying for advice, came from places outside of Massachusetts; that diseases of the lachrymal apparatus, lids, conjunctiva, cornea and sclera constitute a little more than $\frac{1}{10}$ of all the cases; that there were 245 cases of foreign bodies on conjunctiva, cornea and sclera.

Among the operations, those for cataract interest the physician, both for their use in restoring sight and because among competent observers there is still some question as to the best method of operating, and as to the after-treatment. But notwithstanding these differences of opinion, the surgeon has frequently the happiness of restoring to sight, one who has previously been practically blind. Some of the recorded results would be better if taken at a later period, because some of those operated on leave the Infirmary before the eye, though perhaps promising well, has cleared up sufficiently for useful vision, although after a few months good vision may come, or might be obtained by an additional operation.

During the last year forty-six cases of cataract, which promised well, were operated on after the method of Græfe. Of these there were thirty-five, that is, three out of four, which obtained good vision, measured conventionally by the fraction $\frac{1}{15}$ or greater. Five obtained a valuable amount of vision. Four required a secondary operation. Two were lost.

Three cases operated on by the linear method obtained vision respectively $\frac{2}{5}$, $\frac{1}{5}$ and $\frac{1}{3}$.

Appended to this report is an account by Dr. Jeffries of some instances of the comparatively new operation of Passavant for the cure of certain cases of posterior synechia.

II. STATISTICS.

CLASSIFICATION OF PATIENTS, DISEASES, AND OPERATIONS.

Out Patients.

Whole No. Eye Patients,	.	.	.	3,978
“ “ Ear “	.	.	.	1,280
				<hr/>
Total Eye and Ear Patients,	.	.		5,258
Males,	.	.	.	2,762
Females,	.	.	.	2,496
Residents of Boston,	.	.	.	2,762
“ “ other parts of Massachusetts,				2,232
“ “ Maine,	.	.	.	102
“ “ New Hampshire,	.	.	.	60
“ “ Vermont,	.	.	.	19
“ “ Rhode Island,	.	.	.	23
“ “ Connecticut,	.	.	.	6
“ “ other States,	.	.	.	27
“ “ British Provinces,	.	.	.	23
“ “ Foreign Countries,	.	.	.	4
				<hr/>
				5,258

House Patients.

Males,	.	.	.	.	234
Females,	.	.	.	.	108
Total,	.	.	.	.	<hr/>342

Out Patients Continued.

Eye Patients.

Males,	.	.	.	.	2,087
Females,	.	.	.	.	1,891
					<hr/> 3,978

Ear Patients.

Males,	.	.	.	.	675
Females,	.	.	.	.	605
					<hr/> 1,280
Total,	.	.	.	.	<hr/>5,258

DISEASES OF THE EYE.

Lids.

Erysipelas,	.	.	.	.	3
Eczema,	.	.	.	.	17
Abscess,	.	.	.	.	19
Blepharadenitis,	.	.	.	.	219
Hordeolum,	.	.	.	.	34
Chalazion,	.	.	.	.	52
Ectropium,	.	.	.	.	5
Entropium,	.	.	.	.	14
Trichiasis,	.	.	.	.	33

Ptoſis,	6
Symblepharon,	2
Anchyloblepharon,	1
Œdema and Inflammation,	18
Ecchymosis,	2
Lippitudo,	16
Epithelioma,	3
Warts,	6
Nævus,	2
Rodent ulcer,	1

Conjunctiva.

Hyperemia,	34
Conjunctivitis, Catarrhal,	650
“ Blenorrhœic,	9
“ “ neonatorum,	6
“ Granular,	251
“ Phlyctenular,	244
Ecchymosis,	19
Pterygium,	32
Pinguecula,	3
Œdema,	5
Xerophthalmia,	1
Wart,	1
Tumors,	3

Cornea and Sclera.

Keratitis,	243
Abscess of Cornea,	3
Ulcer “ “	297
Opacity and anterior synechia,	11
Leucoma,	134
Staphyloma anterior,	14

Statistics.

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Keratoconus,	1
Sclero-keratitis,	3
Scleritis,	1

Iris.

Iritis, rheumatic,	104
“ syphilitic,	21
“ traumatic,	14
“ serous,	1
Prolapse,	4
Dialysis,	2
Wound of,	1
Hemorrhage from,	2
Foreign body on,	5
Coloboma,	2
Mydriasis,	6
Myosis,	1

Choroid.

Choroiditis,	17
Sclerotico-choroiditis posterior,	16
Irido-choroiditis,	15
“ sympathetic,	6
Glaucoma,	17

Retina.

Hypercæmia,	2
Retinitis,	10
“ albumenurica,	1
“ pigmentosa,	3
“ syphilitica,	1

Retinitis apoplectica,	5
Separation of,	13
Hyperæsthesia,	1

Optic Nerve.

Neuro-retinitis,	7
Atrophy,	32

Vitreous.

Hemorrhage into,	2
Membrane and Opacity of,	13
Foreign body in,	2
Muscæ Volitantes,	17

Lens.

Cataract, hard and soft,	107
“ posterior polar,	4
“ congenital,	18
“ traumatic,	4
“ capsular,	2
Dislocation,	4
Aphakia,	3

Lesions of Globe.

Panophthalmitis,	7
Mikrophthalmus,	1
Hydrophthalmus,	1
Phthisis bulbi,	37
Exophthalmus,	1
Intraocular tumor,	2

Affections of Percipient Apparatus.

Amblyopia,	.	.	.	.	.	73
“ ex abusu,	.	.	.	.	.	11
Amaurosis,	.	.	.	.	.	7
Hemeralopia,	.	.	.	.	.	1

Refraction and Accommodation.

Myopia,	.	.	.	.	.	48
Hypermetropia,	.	.	.	.	.	91
Astigmatism,	.	.	.	.	.	6
Paralysis of Accommodation,	.	.	.	.	.	2
Presbyopia,	.	.	.	.	.	20
Asthenopia,	.	.	.	.	.	91

Muscular Affections and Neuroses.

Paralysis and paresis,	.	.	.	.	.	9
Diplopia,	.	.	.	.	.	12
Strabismus convergens,	.	.	.	.	.	72
“ divergens,	.	.	.	.	.	9
Nystagmus,	.	.	.	.	.	7
Blepharospasmus,	.	.	.	.	.	6
Spasm of rectus superior,	.	.	.	.	.	1
Neuralgia 3d pair,	.	.	.	.	.	15
“ 5th “	.	.	.	.	.	5
Ciliary neuralgia,	.	.	.	.	.	4
Herpes Zoster ophthalmicus,	.	.	.	.	.	1

Lachrymal Apparatus.

Epiphora, and obstruction of Lachrymal Ducts,	69
Affections of Lachrymal Passages,	112

Orbit.

Disease of,	5
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General Injuries.

Foreign Bodies on Conjunctiva, Cornea and Sclera,	248
Burns,	31
Blows and Cuts,	144
Unrecorded,	46
Unfit,	27

RECAPITULATION OF DISEASES OF THE EYE.

Lids,	447
Conjunctiva,	1,258
Cornea and Sclera,	707
Iris,	163
Choroid,	71
Retina,	36
Optic nerve,	39
Vitreous,	34
Lens,	142
Globe,	49
Percipient apparatus,	92
Refraction and Accommodation,	258
Muscular affections and Neuroses,	141
Lachrymal apparatus,	181
Orbit,	5
General injuries,	423
Unrecorded,	46
Unfit,	27
Total,	4,119

DISEASES OF THE EAR.

Abscess of Mastoid Process.	3
Neuralgia of External Ear,	3
Erysipelas of External Ear,	1
Tumor in front of Ear pressing on Meatus Externus,	1
Tumors of Lobe removed,	4
Abscess of Lobe,	2
Eczema of Meatus Externus and External Ear,	30
Abscess of Meatus Externus and External Ear,	34
Foreign bodies and Insects removed from	
External Meatus,	16
Obstruction of Meatus Externus from Cerumen,	226
Furuncle in Meatus Externus,	9
Otitis Externa,	111
Polypoid granulations in Meatus Externus and on	
Membrana Tympani,	7
Polypi in Meatus Externus and on Membrana	
Tympani removed,	39
Aspergillus Flavescens,	1
Aspergillus Nigricans,	1
Calcareous Degeneration of Membrana Tympani,	5
Chronic perforation of Membrana Tympani,	20
Rupture of Membrana Tympani from blow on	
External Ear,	1
Obstruction of Eustachian Passage,	4
Chronic Aural Catarrh,	325
Acute Aural Catarrh,	122
Otitis media chronic and acute,	277
Myringitis,	8
Deafness from injury to Cranium,	2
Deafness associated with cerebral disease,	2
Nervous Deafness,	4

Disease of Labryrinth,	2
Deaf mutes,	12
Unfit,	21
Unrecorded,	13

OPERATIONS ON THE EYE.

Cataract.

Method of von Græfe(cataracta simplex)	46
“ “ “ “ following irido-choroiditis,	2
“ “ “ “ congenital cataract,	3
“ “ “ “ traumatic “	2
Linear method,	3
Discission	2—58

Iridectomy.

For artificial Pupil,	29
“ Irido-choroiditis,	4
“ Glancoma,	8
“ Iritis old,	1
“ Abscess of cornea,	5
“ Anterior Staphyloma,	1—48
Posterior Synechia, Passavant's operation,	16—16
Hernia of Iris,	1— 9
Opaque capsule, Agnew's operation for,	3
“ “ removal of,	9—12
Anterior Staphyloma, Critchett's operation for,	1
“ “ removal of,	1— 2

Enucleation of Eye.

For Sympathetic Ophthalmia,	16
“ Anterior Staphyloma,	1
“ Disorganized Eye,	3—20

Pterygium, Desmarres operation for,	5— 5
Strabismus Convergens, . . .	37
Strabismus Convergens alternating, . . .	4
“ “ Secondary operation for,	1—42
“ Divergens, . . .	4— 4
Entropion, . . .	9
Trichiasis, . . .	22
“ Arlt's operation for,	4
Canthoplasty, . . .	3
Symblepharon, modification of Teale's operation for,	1
Ptoxis, . . .	1
Chalazion, . . .	14
Plastic of Lids, . . .	1
Nævus of Lid, . . .	1
Removal of Foreign body from Iris,	3
Epithelioma of lid, . . .	1
Removal of orbital Tumor, . . .	1
“ “ Epithelioma of conjunctiva,	1
Exploratory operation for cyst of orbit,	1
Paracentesis of cornea,	13
Miscellaneous,	13

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GUSTAVUS HAY,
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HENRY L. SHAW,
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B. JOY JEFFRIES,
ROBERT WILLARD,
CLARENCE J. BLAKE.

III. REPORT OF DR. B. JOY JEFFRIES.

ON OPERATIONS FOR BREAKING UP ATTACHMENTS OF THE IRIS TO THE CRYSTALLINE LENS OR POSTERIOR SYNECHIÆ.

Professor Græfe in 1869 published in his Archives, a letter from Dr. S. Passavant explaining his method of operating to break away attachments of the iris to the lens capsule, which was, by "puncturing with a lance knife the anterior chamber at the edge of the cornea, passing in the iris forceps, grasping the iris, and by gently drawing, breaking away its attachment at the pupillary edge."

These cuts give the right and left pupil of one of the patients he operated on, while under the influence of atropine.

Right Pupil.



Left Pupil.



He says, "all these attachments were broken up with intervening periods of from three to eight or ten days, during which the patient went home and followed her home occupations. The first operation was done April 14, 1868, and the freeing of the last attachment June 15, 1868. The pupils are now round and perfectly movable. The magnifying glass shows spots of black pigment left on the anterior capsule, where the synechiæ were broken."

In explanation of this operation I would say, that these synechiæ or attachments from inflammation, of the iris to the lens capsule or cornea, are now considered the fruitful

source of repeated attacks of iritis, and their removal has been attempted in various ways. The danger to the lens and capsule has, however, till now almost prevented ophthalmic surgeons from interfering in the methods heretofore proposed and carried out.

Outside of its very great necessity and importance to the ophthalmic surgeon, I think other physicians and surgeons will be interested to learn how the eye tolerates such operative interference. I need not dwell on the effect of attachments of the iris to the capsule, I have always felt dissatisfied in seeing them left after iritis; now we have a safe and reliable means of breaking them away by grasping them with delicate forceps. I use a pair of moderately curved iris forceps, the teeth of which have been ground off and the points serrated. The more delicate their spring the less liable are we to pinch the iris too hard. Flowing off of the aqueous humor does not interfere, as the ends of the forceps are rounded and can be pushed between the iris and cornea without danger. I have so far found this operation unexpectedly easy, and certainly most satisfactory in result.

Iritis having just run its course would naturally seem to contra-indicate interference, but experience has so far shown differently. The following are the results of twenty operations performed by me at the Infirmary.

A woman, æt. 22, has had severe specific iritis in the left eye, the sequelæ of which are, several strong posterior synechiæ which atropine and the continued specific constitutional treatment have not broken up. The pupil is also covered by a film of deposit, much reducing vision and obscuring an ophthalmoscopic examination. Fig. 3 gives the pupil of the left eye dilated by atropine, showing the attachments of the iris to the capsule of the lens.

The film in the pupil is not shown. Fig. 4 shows the result of the operations.



Fig. 3.



Fig. 4.

The Passavant operations were as follows :

March 16, 1870.—Upwards and outwards.

“ 22, “ Upwards and outwards, on same synechia.

March 25, 1870.—Downwards and inwards.

“ 29, “ Downwards. Two were broken away.

April 2, 1870.—Upwards and inwards.

“ 7, 1870.—Upwards.

“ 15, 1870.—Upwards and outwards, where the first two were done, as the iris seemed to be fastened down quite to its insertion. and the corneal opening was made far back, in order to be able to pull on the iris as near its periphery as possible. From this cut some blood flowed into the anterior chamber, obscuring a distinct view and thus preventing a second application of the forceps. In two days the blood was gone and the pupil round under atropine.

May 4, 1870.—The patient was discharged from operative treatment, the pupil freely movable, but without atropine varying a little from a circle up and out, where three attempts had been made to entirely remove attachment, as is shown in Figure 4 above. This synechia was broken *twice*, so far as the iris could be pulled. Whether

the iris does not here contract from exudation in its tissue, or is fastened down, I can not decide. I judge, however, the latter, as the rest of it responds readily to light. The pupil now is much clearer and the fundus can be well seen with the ophthalmoscope. Vision of course is correspondingly improved, no specific affection of the retina or choroid was noticed. The eye looks almost the same as the other, and is greatly improved in appearance. The three punctures of the cornea so close together have left a slight cicatrix, which will probably dissappear, or if not, is of no consequence cosmetically. The spots of pigment now seen on the capsule show where the synechiæ were. There is no film over the pupil, and it is a question whether the breaking away of the synechiæ by removing the connection of the deposit on the capsule in the pupil from the iris, did not hasten or facilitate its absorption. My own feeling was, that such a number of synechiæ and amount of lymph in the pupil would have ruined the eye, as I should have looked to the pupillary membrane becoming further organized.

A woman, æt. 38, has had severe specific iritis in both eyes, and, as sequelæ, a single synechia downwards in the left eye, whilst in the right there are several, some broader, others quite delicate close together.



Fig. 5.

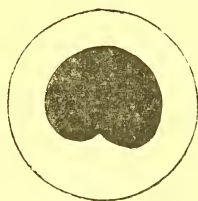


Fig. 6.

Fig. 5 shows the synechiæ in the right pupil dilated by atropine. Fig. 6 shows the one in the left pupil under atropine. Continued atropine and constitutional treatment have failed to break these attachments, which do not show themselves in the right eye except under atropine. I did five Passavant operations on the two eyes, as follows :

March 25, 1870.—On the left eye, downwards, clearing the pupillary edge completely.

On the right eye, April 19, 1870.—Downwards, two were broken.

April 22, 1870.—Up and inwards.

“ 26, “ Down and outwards.

Although I anticipated being obliged to perform at least four operations on this, the right eye, these three sufficed to free the iris completely, two synechiæ being broken away together by opening the forceps wide enough to embrace them at once. May 4, 1870, the effect of the atropine has disappeared. Both pupils are perfectly round and movable, responding to light and shade. The patient continues under constitutional treatment for other signs of syphilis. All the synechiæ in this case gave away readily and no blood entered the anterior chamber, as I did not have to pull the iris, except at its pupillary edge, and so did not require my corneal cut to be where blood-vessels would be touched by the lance-shaped knife.

A woman, æt. 25, has had a severe specific iritis in the left eye, which having run its course, has left a posterior synechia downwards, that atropine and constitutional treatment do not break. Fig. 7 shows the shape of the left pupil under atropine.

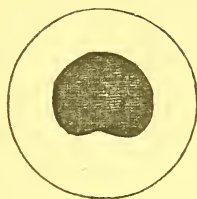


Fig. 7.

May 18, 1870.—I broke this attachment by Passavant's operation, and the pupil became round and movable. The patient continued under constitutional treatment for syphilis.

A woman, æt. [?] 25-30, has had chronic irido-choroiditis and as sequelæ, some four or five attachments of the iris to the capsule. Around these the pupil dilates, showing the iris tissue to be still good. There is a constant trouble from the eye, aggravated I judge by the dragging of these posterior synechiæ. Therefore, under ether, I broke away two that were close together at the upper side. After breaking one, and the aqueous had escaped, I found no great difficulty in pushing the point of my closed forceps between the iris and the cornea, against which it of course laid, to reach the next one close beside it. In a few days I broke another at the opposite side of the pupil, also under ether. The patient was rendered quite sick and uncomfortable by the ether, so much so that I proposed to her trying to break the next without anæsthetic. This she consented to, and I succeeded without difficulty. She did not complain of the pain as being very great, the dragging on the iris seeming to be the most painful part; that it was not severe was certainly proved by her preferring to have the fourth and last operation done without ether. With a little care and command over the patient, I had no difficulty in holding the

eye sufficiently steady. A compressive bandage was each time left on over night. The aqueous humor is, however, much sooner re-secreted and the corneal wound closed. The patient went back to her occupation in a store within forty-eight hours after the last operation, the eye being now hardly if any troublesome.

Another case was that of a man injured by the premature discharge of a blast. The face and eyes were full of powder. He has had traumatic iritis in the left eye, and atropine showed three broad posterior synechiæ. Both corneæ were so filled with powder, and the eyes in such a bad condition, that I judged it best to remove as many of the grains of powder as possible, and for that purpose kept him under ether some time, since he could not have held the globe still enough for me to work without. He was miserably sick from the ether, and dreaded taking it again. I therefore gladly availed myself of the kindness of Dr. Robert Amory, in offering to give the patient nitrous oxide gas. As he has reported, on the special method of administering this anæsthetic, I omit speaking of it here, except to say that after the mouth-piece was removed, I had more than ample time to carry out my operation, time enough to have performed an iridectomy, or even a longer operation. For such short operations not followed by pain, I regard the nitrous oxide as invaluable. Passavant's operation has to be repeated as many times as there are widely separated attachments, and although I persuaded one patient to submit to it seven times under ether, we shall not always be so fortunate. The posterior synechiæ were so broad in this case, and the iris possibly friable, that I did not like to attempt to break them away without an anæsthetic for fear of the pain. The patient was perfectly satisfied

with the gas, experiencing no pain whatever. A compressive bandage was kept on a few hours after each operation. The three operations have resulted in leaving a free movable iris and pupil. Spots of pigment where the attachments were, are seen on the capsule. To what extent they will disappear I cannot attempt to say. Judging from previous cases, I think all lymph will be gradually absorbed.

A man, æt. sixty, has had granulations, ulcers of the corneæ, etc. The results are, central corneal opacity in the right eye, with anterior synechia, and a single posterior synechia downward in the left eye.

May 23, 1871.—An iridectomy for artificial pupil was done on the right eye, and a Passavant on the left, perfectly freeing the pupillary edge of the iris.

A man, æt. twenty-three, has run through with a fearful attack of syphilis, leaving as sequelæ, total posterior synechia and closed pupil in the left eye, and three or more attachments in the right.

May 6, 1871.—Iridectomy downward for artificial pupil was done on the left eye, and by a Passavant the attachment below broken in the right eye. Atropine now keeps *this clear* of the capsule, although there are still two attachments above.

May 30, 1871.—I made *two* corneal openings with a broad needle opposite the two attachments and broke them both one after the other. The flowing off of aqueous did not prevent my sliding the forceps between the cornea and iris without injuring the capsule. The two punctures did not cause the loss of a whole drop of aqueous fluid. This procedure, of course saved one additional operation.

A man, æt. 32, has in the right eye total synechia, lens

opaque, iris discolored, globe soft, vision gone—the result seemingly, of old irido-choroiditis. In the left eye there has lately been slight irido-choroiditis resulting in a rather broad synechia downwards,

May 30, 1871.—I broke this attachment by a Pas-savant's operation and the released iris gave a circular pupil. I looked upon this attachment, perhaps of old date, as a readily exciting cause of fresh inflammation.

In all these twenty operations I did no harm to the capsule, and certainly improved the condition of the eye. In the second operation of the second case, owing either to the close and broad attachment or my not grasping the iris deeply and firmly enough, it was a little torn, and a filament dragged into the wound. It, however entirely replaced itself before the eye was bandaged, and no traces are now seen.

Instead of an iridectomy lance-shaped knife, I now use a broad paracentesis needle. I find no difficulty in manipulating my delicate forceps in the corneal wound this makes, and I lose but little aqueous before the iris is grasped, when the escape of the fluid rather assists in breaking the attachment. Atropine is continued, and the humor secretes so quickly, that there is no time for the iris to again fasten itself to the capsule. I have occasionally succeeded in not losing all of the aqueous humor during the whole operation.